

Sub
D3
CONX

(e) protoporphyrinogen oxidase enzymes;

(f) uroporphyrinogen decarboxylase enzyme;

(g) putative uroporphyrinogen decarboxylase enzyme;

(h) porphobilinogen synthase enzyme;

(i) hydroxymethylbilane synthase enzyme;

(j) glutamate-1-semialdehyde 2,1-aminomutase enzyme;

(k) glutamate tRNA ligase enzyme;

(l)] \pm glutamyl-tRNA reductase enzyme[;

(l) Mg-chelatase enzyme; and

(m) ferrochelatase enzyme].

B1
Bent

2. (Amended) The substantially purified nucleic acid molecule according to claim 1, wherein said nucleic acid molecule comprises a nucleic acid sequence selected from the group consisting of [SEQ ID NO: 1 through SEQ ID NO: 677] SEQ ID NOS: 586, 590, 594, 596, 597, 599, 600, 601, 604, and 605.

Please add the following claim:

Sub
D4
B2

-- 10. The substantially purified nucleic acid molecule according to claim 1, wherein said nucleic acid molecule comprises a nucleic acid sequence having between 100% and 90% identity with a sequence selected from the group consisting of SEQ ID NOS: 586, 590, 594, 596, 597, 599, 600, 601, 604, and 605. --

APD